

Quiz TwoLecture: 8:30
 9:30SI: Alex Ashley
 Avni Becca
 Jason Matt**No notes. Calculators are allowed.**

Write clearly and explain your reasoning.

 1 (10 points) Compute the following integrals.

(a) (5 points) $\int t^2 \cos(t) dt$

(b) (5 points) $\int_0^3 \frac{x}{x^2+1} dx$

2 (5 points) The depreciation rate of a house in today's housing market obeys the equation $V'(t) = -18,000te^{-3t}$, where $V(t)$ is the value of the house in t years. If the house is currently worth \$150,000, what will it be worth in two years? Please round your answer to the nearest dollar.

3 (5 points) The marginal cost function for producing x units is $12x^2 - 30x + 100$ dollars. Find the increase in cost if production is increased from 100 to 105 units.